Fig. 1a Location Device Scheme 1

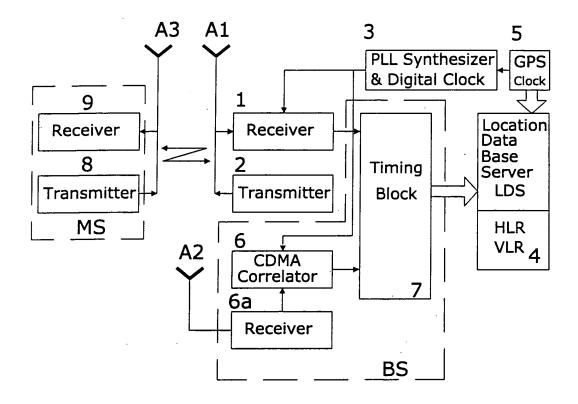


Fig. 1b Location Device Scheme 2

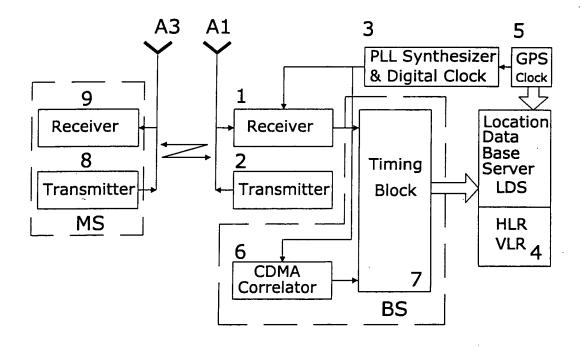


Fig. 1c Location Service Scheme GPS Clock Tst, Tar, T,
Tst, Tar, T,
Tst, Tar, T,
Tst, Tar, T, Digital Interface Location MSi code Data-Base =1,2..nServer BS1 BS1-LD1 GPS Clock Tst, Tar, Tr.
Tst, Tar, Tr. MSi code Δn. Digital Interface MS1 MS2 MSn =1,2..n´ BS2 BS2-LD2 **Position** Application GPS Clock Tst, Taq. 7;
Tst, Taq. 7; MŞi code Digital Interface **BSn** MSn_x,y,z

Fig. 2 Diagram of BTS Receiver with Timing Block Device

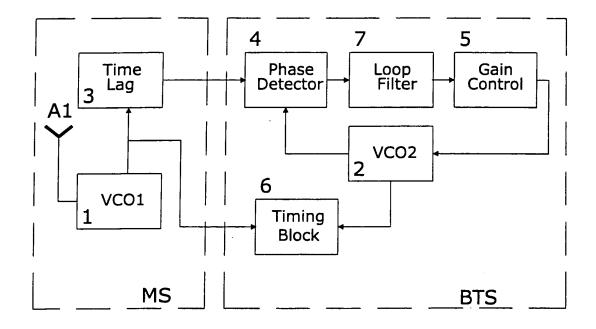


Fig. 3a & 3b Location Device and Antenna Configuration Scheme

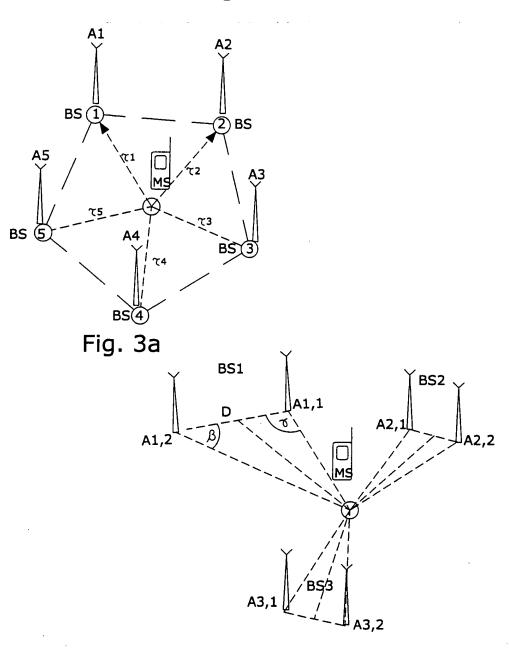


Fig. 3b

Fig. 4a Diagram of Location Device LD

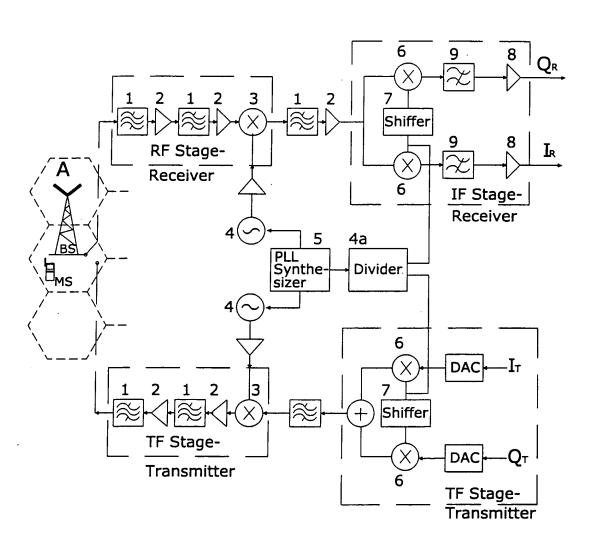


Fig. 4b Diagram of Location Device LD continued

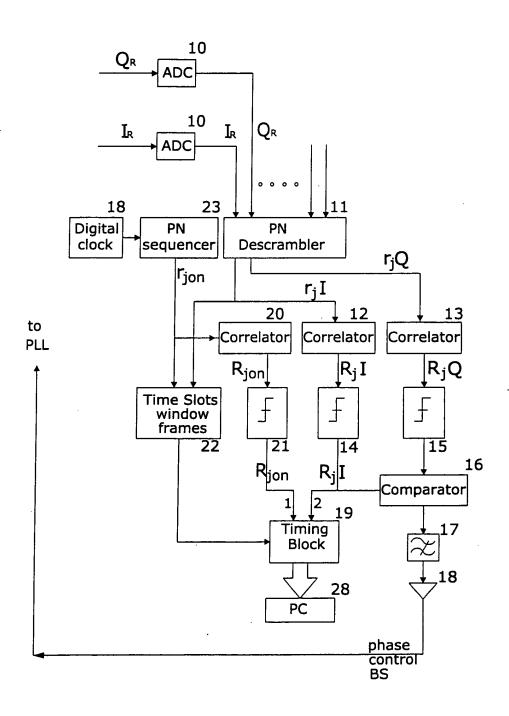


Fig. 5a Diagram of Unit 19-Timing Block in Fig.4b

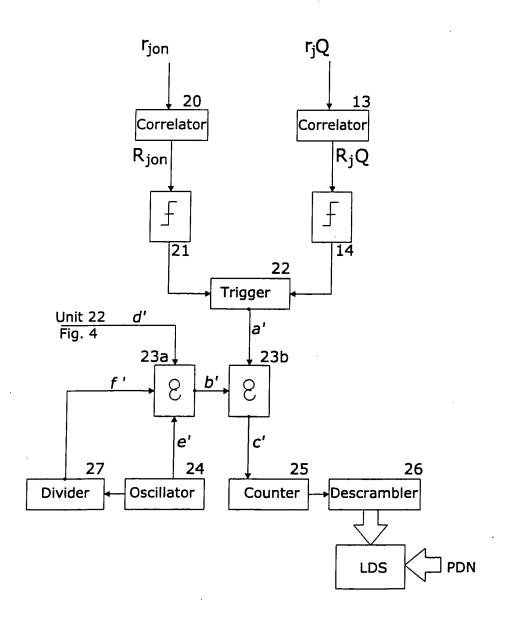


Fig. 5b Diagram of Signal Pulses

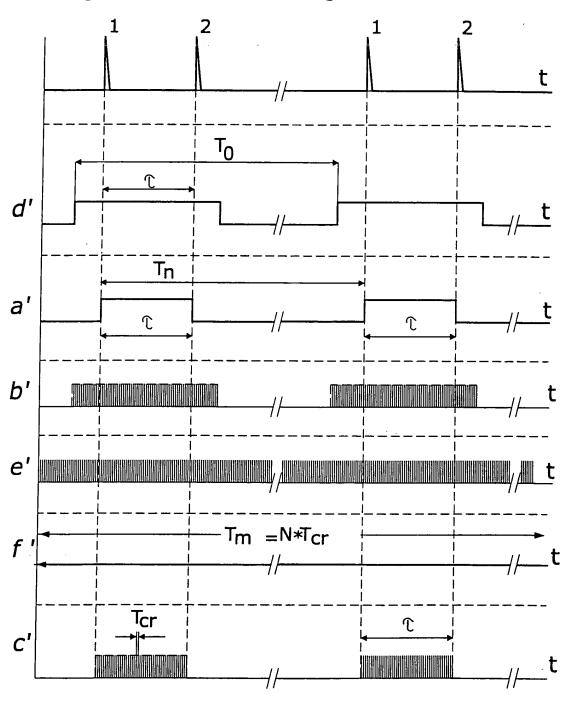


Fig. 6a Diagram of 2-Receiver Configuration

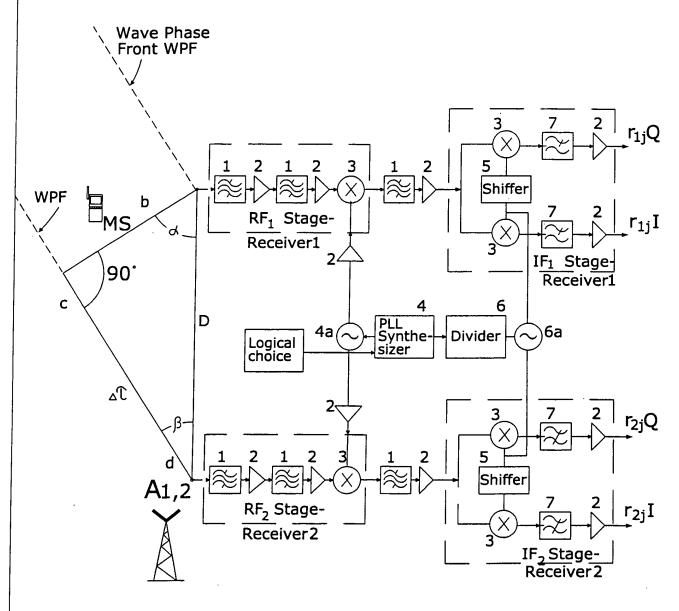


Fig. 6b Diagram of 2-Receiver Configuration continued

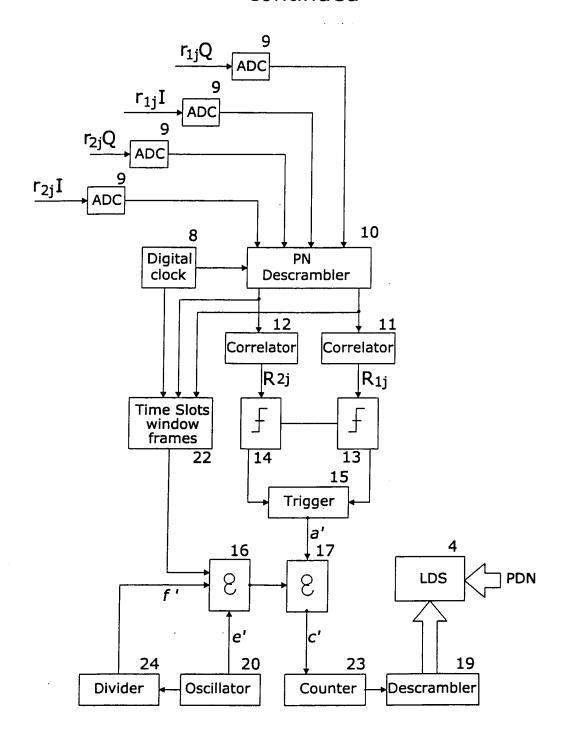


Fig. 7 TDOA 3-D Representation

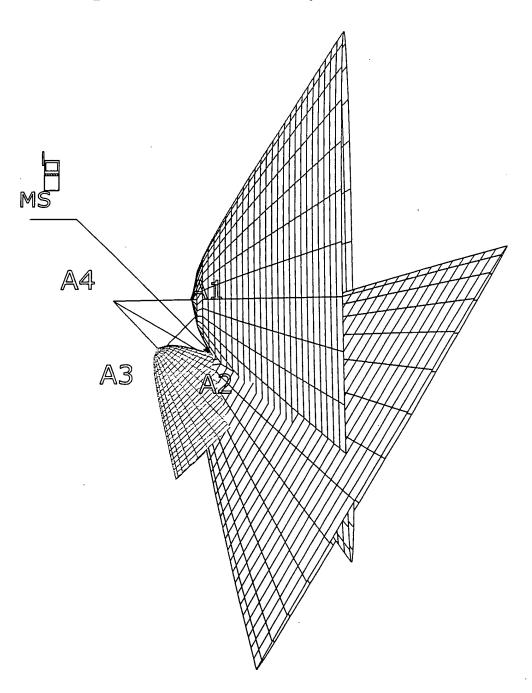


Fig. 8
Wireless 3D Hyperbolic
Trilateral Location Method

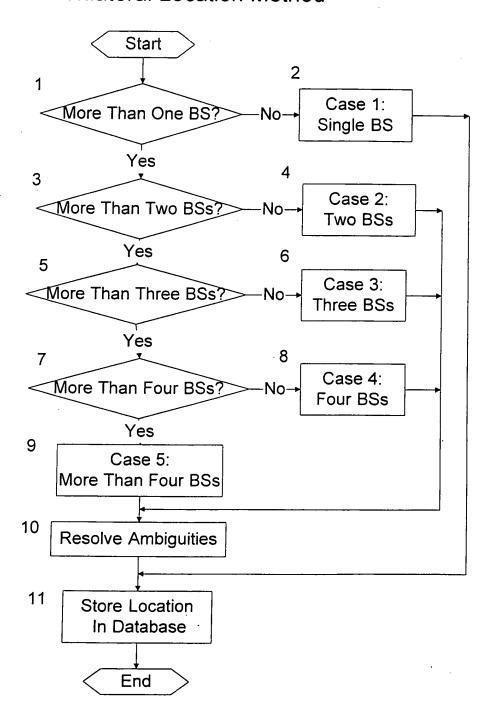


Fig. 9 Single Base Station

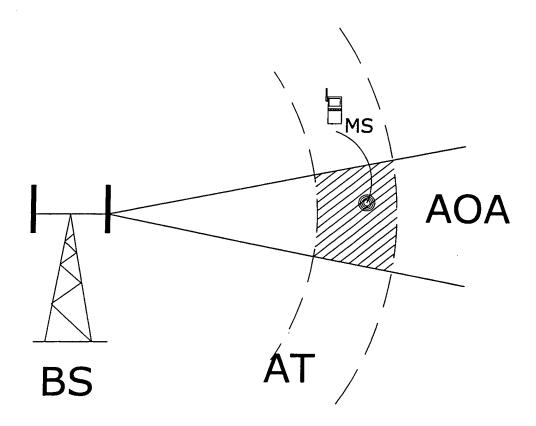


Fig. 10 Two Base Stations

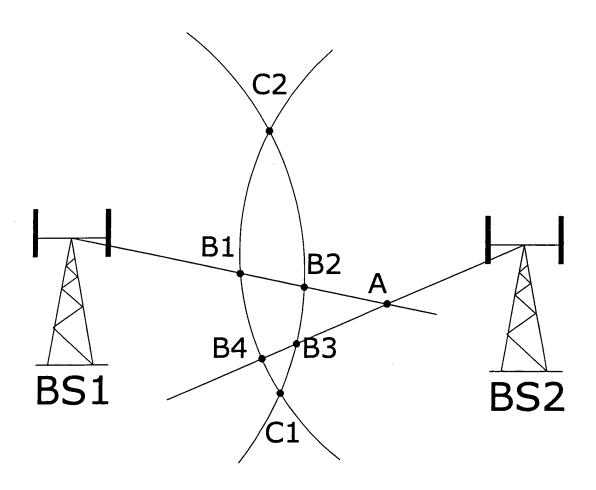


Fig. 11a Three Base Stations: AOA Method

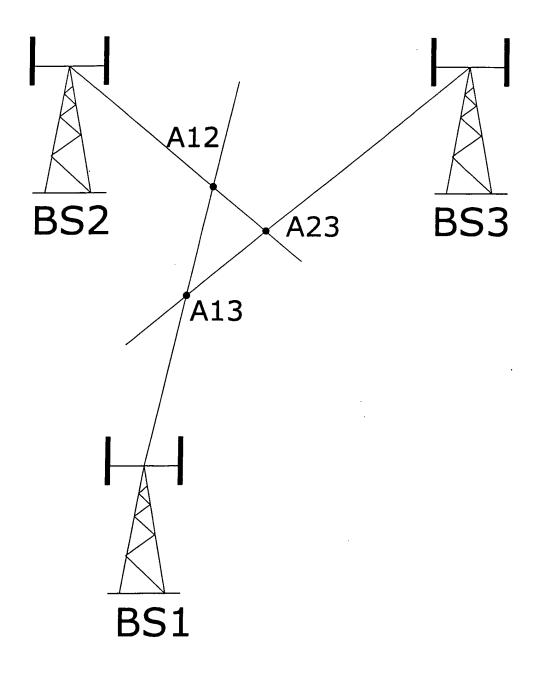


Fig. 11b Three Base Stations

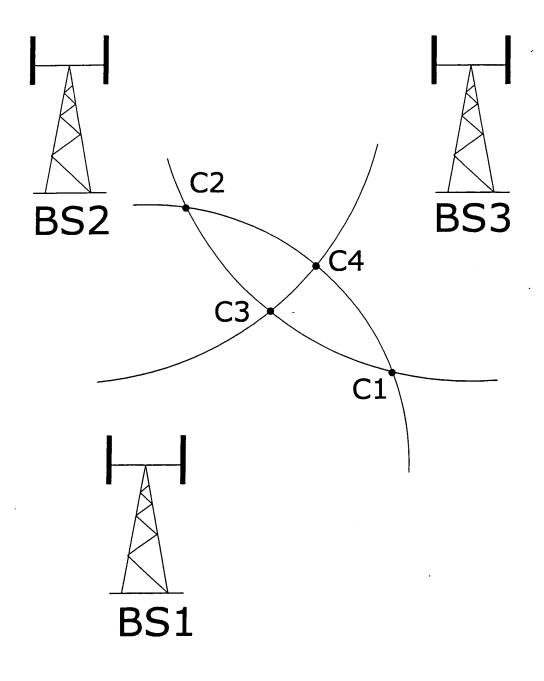


Fig. 12a
Computations For Case of
Three Base Stations

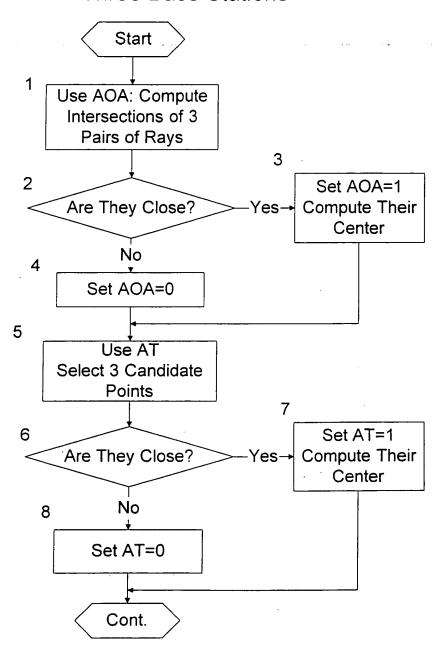


Fig. 12b
Computations For Case of Three Base Stations (cont.)

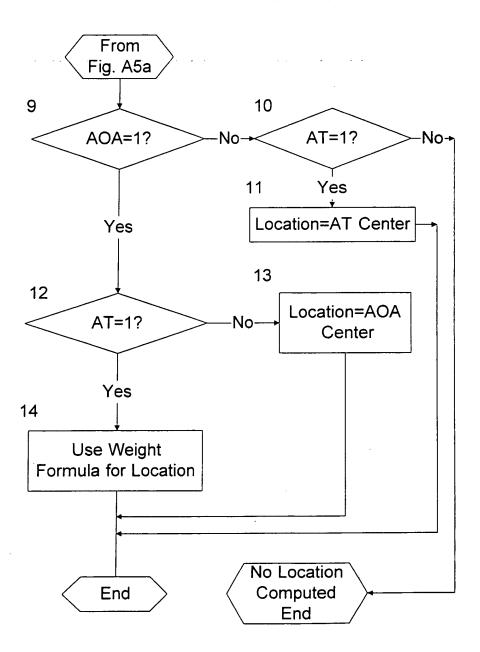


Fig. 13 Four Base Stations

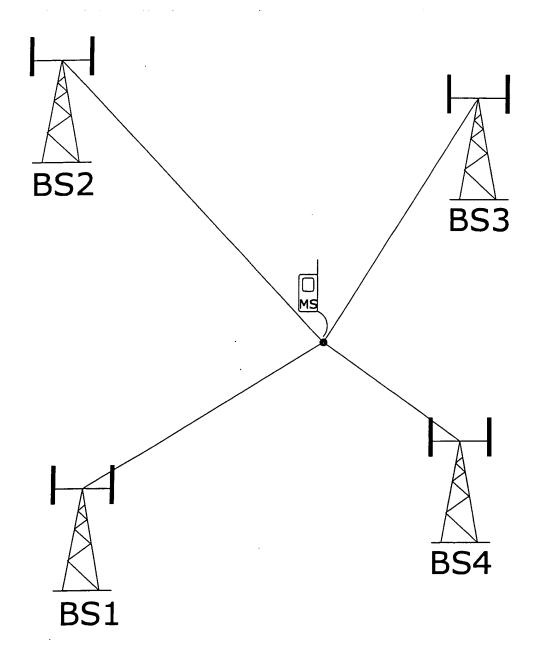


Fig. 14
Computations for Case of
Four Base Stations

